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# Shame and guilt in children: Differential situational antecedents and experiential correlates

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Situational antecedents and experiential correlates of shame and guilt in children were examined by having 6–11-year-olds give ratings of the extent to which two types of situations would elicit a protagonist's feelings of shame and guilt. It was predicted that one type of situation should elicit both shame and guilt, because the protagonist caused harm to another person by behaving incoherently or incompetently. The other type of situation was predicted to elicit more shame than guilt, because the protagonist behaved incoherently or incompetently without causing harm to anyone. Two types of questions were used to elicit children's ratings: in term-based questions the emotion terms 'guilt' and 'shame' were used, while in correlate-based questions guilt and shame were alluded to by citing experiential correlates of these emotions. Children aged 9 and upward differentiated between both types of situations and between judgments of shame vs. guilt, both when giving term-based and when giving correlate-based ratings. There were no systematic differences in children's performance depending on whether they gave correlate-based or term-based judgments.

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Over the last decade developmental researchers have shown increasing interest in the emotions of guilt and shame in children. Most of the early work in this area was directed at children's understanding of one or both of these emotions (Ferguson, Stegge, & Damhuis, 1991; Graham, Doubleday, & Guarino, 1984; Harris, 1989; Nunner-Winkler & Sodian, 1988), but in recent years attempts have also been made to study children's actual feelings of guilt and/or shame (Ferguson & Stegge, 1995; Lake, Lane, & Harris, 1995; Tangney, Burggraf, & Wagner, 1995; Williams & Bybee, 1994; Zahn-Waxler, Kochanska, Krupnick, & McNew, 1990). Much of this recent work is aimed at detecting individual differences in children's proneness to experience these emotions, which is seen as a potential precursor of later emotional pathology.

A key issue in the above research is how to differentiate between guilt and shame. This has become especially important since a controversy has arisen concerning the adaptive value of both emotions. Some researchers have interpreted the available evidence as indicating that guilt is an adaptive and pro-social emotion and that being guilt-prone reflects an adaptive and pro-social orientation, whereas shame is maladaptive and being shame-prone provides a serious risk for later emotional pathology (Tangney *et al.*, 1995). Against this view it has been argued that both shame and guilt are to some extent adaptive and that an excess of each can be maladaptive (Ferguson & Stegge, 1995; Harder, 1995). Obviously, to solve this issue empirically, separate measures of guilt-proneness and shame-proneness are needed that can be related to indices of psychosocial functioning and psychopathology.

A straightforward way to assess children's proneness to feel guilty or ashamed would be simply to ask them how often in their daily lives they feel guilty or ashamed. However, such an approach is open to criticism for at least two reasons. The first is that the situational context in which these emotions arise is not taken into account; the second is that it is unclear whether children are sufficiently aware of the difference in meaning between the terms of emotion 'guilt' and 'shame' to be able to distinguish between these actual emotions when asked questions about them. Both problems have prompted researchers to look for alternative measurement strategies and the general aim of the present study to examine empirically the validity of the assumptions underlying these alternative strategies when measuring shame and guilt in children.

To take the situational context into account, most researchers have adopted a scenario-based approach in which participants are first asked to imagine themselves being in one of several different potentially shame- and/or guilt-eliciting situations and then to indicate how they would feel. Given the currently prevailing view that any norm-violating event will elicit guilt when the person's evaluations are focused on his or her own behaviour, and shame when they are focused on the person as a whole (Tangney, 1995), situations have been used that are likely to elicit both guilt and shame. These situations usually depict a perpetrator who bears some responsibility for harming someone, in that the harm could have been avoided even though it was not intentionally caused.

One problematic consequence of using the same situations to elicit both guilt and shame is that relatively strong correlations between the resulting measures of shame- and guilt-proneness are likely to result. In fact, reported correlations between both types of measures range from .40 to over .60 (Ferguson & Stegge, 1995; Harder, 1995; Tangney, 1995). This is especially undesirable if one aims to find differential relations of both

emotions with indices of social functioning and psychopathology. As a remedy, statistical methods have been used to distinguish the relations of shame-proneness with various indices of social functioning and psychopathology from those of guilt-proneness with these indices (Tangney *et al.*, 1995), but this approach has been criticized on methodological grounds (Ferguson & Stegge, 1998).

Less strongly interrelated measures of shame- and guilt-proneness might be obtained if such measures could be based on situations that are specifically designed to tap participants' tendency to experience one or other of these emotions, rather than both. However, designing such situations requires a theoretical formulation of the distinction between shame- and guilt-eliciting situations. Since early attempts in this respect have not been successful, present-day theorists have downplayed the role of different situational antecedents in favour of the role of the individual's self-directed negative evaluations (Tangney, 1992).

Nevertheless, it has been repeatedly found that some events are far more likely to elicit shame rather than guilt, whereas other events elicit both shame and guilt (Ferguson *et al.*, 1991; Tangney, 1992). To the present authors, this suggests that whether an event elicits shame or guilt not only depends on the focus of the individual's self-directed negative evaluations, but also on characteristics of the event.

The present study is guided by the assumption that two separate dimensions underlie the shame- and guilt-eliciting nature of events. It is assumed that people experience feelings of guilt when they think that they have violated a moral rule, the most important of these being that one should not cause harm or some other disadvantage to anyone (cf. Baumeister, Stillwell, & Heatherton, 1994).

Shame, in contrast, does not depend on the moral relevance of an event. In line with the analysis of Lindsay-Hartz, De Rivera, and Mascolo (1995), it is assumed here that the key elicitor of shame is an unwanted identity. Lindsay-Hartz *et al.* take this to imply that shame results from realizing that one is what one does not want to be. Since it has been found that shameful persons are especially bothered by what important other persons might think about them (Ferguson *et al.*, 1991), the present authors prefer to define an unwanted identity in terms of what one thinks about what other persons might think about the self. Accordingly, in our view shame results from one's suspicion that important other persons might consider one to be what one does not want to be.

This implies that virtually any behaviour or characteristic can, in particular contexts, elicit shame. Some behaviours and characteristics, however, yield an unwanted identity in many different contexts. A very important subset of unwanted, and therefore shame-eliciting, identities results from not being able to exert sufficient control over one's behaviour (i.e. from behaving incoherently). Typically shame-eliciting behaviours that yield this type of unwanted identity include excessive emotionality, clumsiness, etc. Another type of incoherence includes breaking promises and not being able to conform to standards that one has professed oneself.

Unwanted identities also result from behaviours revealing a person to be incompetent in a particular domain. A lack of ability has been recognized repeatedly as eliciting shame (Covington & Omelich, 1984; Weiner, 1985). In sum, any behaviour that leads people to think that they have behaved incompetently or incoherently and that important other persons might consider them to be incompetent or incoherent provokes shame.

When taken together, this analysis of guilt and shame implies that a distinction can be

made between two types of situations. In the first type, someone behaves incoherently and/or incompetently without causing harm to anyone: such situations can be expected to elicit shame rather than guilt and are therefore further referred to as 'shame-only' situations. In the second type, a person's incoherent and/or incompetent behaviour does cause harm to another person: such situations can be expected to elicit both shame and guilt and are therefore further referred to as 'shame-and-guilt' situations.

The study's first aim is to test these ideas. Accordingly, respondents are asked to imagine five shame-only situations in which a protagonist risks an unwanted identity by behaving incoherently and/or incompetently, but without causing harm to anyone. In addition, five shame-and-guilt situations are presented in which the protagonist also behaves incoherently and/or incompetently, but in such a way that real or imagined harm results for another person. Since the literature on responsibility-related antecedents of feelings of guilt (Ferguson, Olthof, & Stegge, 1997; McGraw, 1987) indicates that guilt not only results from intentionally caused harm, the present authors included both cases of intentional harm and cases of unintentional, yet foreseeable, harm. Respondents used a rating scale to indicate how guilty and how ashamed the protagonist would feel. In accordance with the study's aim of finding ways to improve on currently available instruments for measuring guilt and shame-proneness, it was decided to use the same type of stimulus material as is used in such instruments (i.e. imaginary situations; Ferguson & Stegge, 1995, 1998; Tangney, 1995). On the basis of the above analysis, two predictions can be made: first, the shame-only situations should elicit higher ratings of shame than of guilt, whereas this difference should be smaller or non-existent for the shame-and-guilt situations; and secondly, the shame-only situations should elicit lower ratings of guilt than the shame-and-guilt situations, whereas this difference should be smaller or non-existent for ratings of shame.

The study's second aim is to examine the development of children's ability to distinguish between the two types of situations described above. In a developmental study, Harris, Olthof, Meerum Terwogt, and Hardman (1987) asked 5–14-year-old English and Dutch children to describe situations in which people would feel guilty and situations in which they would feel ashamed. Although Harris *et al.* did not carry out a detailed analysis of the nature of the situations that children generated, their analytical procedures nevertheless enabled them to conclude that 5-year-olds were unable to describe situations that were recognizable by adult judges as elicitors of either shame or guilt, but that English 7-year-olds and 11-year-olds from both countries were able to do so. These findings indicate that 6–11-year-old children are increasingly able to distinguish between the emotions of shame and guilt in terms of the situations that elicit them.

When combined with the above analysis, the findings of Harris *et al.* can be taken to imply that 6–11-year-old children increasingly consider situations in which someone behaves incoherently and/or incompetently without causing harm to anyone as elicitors of shame rather than guilt; whereas they consider situations in which the protagonist's incoherent and/or incompetent behaviour does cause harm as elicitors of both shame and guilt. To test this hypothesis, the situations described above are presented to a group of 6-year-olds and a group of 11-year-olds. In the developmental literature the age of 9 has been identified as the age at which children's reports about guilt and shame start to approximate those of adults (Ferguson & Stegge, 1995). A group of 9-year-olds was

therefore also included in this study. It is predicted that the 9- and 11-year-olds' ratings will be more consistent with the first two predictions than those of the 6-year-olds.

Earlier, this study identified a further problem with simply asking children how often they feel guilty or ashamed (i.e. that children might be insufficiently aware of the differential meaning of the emotion terms 'guilt' and 'shame'). The use of these terms has been criticized on the grounds that even adults are unaware of the differences between them (Ferguson & Stegge, 1998; Tangney, 1995). Therefore, most researchers have used indirect questions with both adults and children. That is, respondents are asked to indicate to what extent they would experience particular experiential correlates of each emotion (Ferguson & Stegge, 1995; Harder, 1995; Tangney *et al.*, 1995). In this indirect strategy, guilt is indicated by prosocial responses such as wanting to make an excuse or thinking about how to repair any damage that one has caused. Shame is indicated by thoughts about hiding oneself or about how bad one is as a person.

This solution to the dependent measure problem is itself not necessarily without problems, especially when the participants are children. One disadvantage of asking participants whether a particular shame- or guilt-related experience would occur is that there need not be a one-to-one correspondence between the particular experiential correlate that is referred to in the question and the target emotion. Moreover, the strength of such links might vary with age. For example, whereas one child, who imagines feeling guilty after having unintentionally made a dent in his father's car, might agree that he would think about how to restore the relationship with his father, another child might disagree, because her feelings of guilt elicit thoughts of a particular strategy to repair the damage, for example by beating out the dent herself. The general point is that a respondent's denial that a particular guilt- or shame-related thought or feeling or behaviour is likely to occur does not necessarily imply that he or she does not feel guilty or ashamed. The denial might also indicate that the respondent considers other guilt- or shame-related thoughts, feelings or behaviours more likely.

At the same time, claims of a lack of knowledge of the meaning of the emotion terms 'shame' and 'guilt' notwithstanding, there is evidence that even children are to some extent able to distinguish between them. Specifically, Harris *et al.*'s (1987) use of these terms did not prevent children aged 7 and upward from describing situations that adults could recognize as elicitors of either shame or guilt. Similarly, Ferguson *et al.* (1991) found that 11-year-old children associated the terms 'guilt' and 'shame' with different situational antecedents and with different reasons for experiencing the emotion. In a second study, these authors found that even younger children differentially associated the terms 'guilt' and 'shame' with statements about the reasons, meaning, and expressional, experiential and action tendency aspects of these emotions.

In sum, although most researchers have preferred to use respondents' ratings of the intensity of several experiential correlates of guilt and shame, it is not clear whether such ratings actually provide a better index of children's emotional responses than ratings employing the terms themselves. Accordingly, the third aim of the present study is to examine which type of ratings yields children's best performance in terms of differentiating shame-only situations from shame-and-guilt situations, and in terms of responding differentially to questions about guilt vs. shame.

To this end, children rated the intensity of the protagonist's shame and guilt in the shame-only and in the shame-and-guilt situations in two different ways. That is, they

gave ratings of both emotions based on the emotion terms and they also gave ratings based on particular experiential correlates of each emotion. Both types of ratings are compared in terms of how far the results are consistent with the theoretically-based predictions articulated above.

## Method

### *Participants*

Participants were 48 children from two schools in two small towns near Utrecht, in the Netherlands. These children were drawn from the participants in a larger project aimed at identifying the antecedents of individual differences in shame- and guilt-proneness. Children came from families of mixed socio-economic backgrounds. They were divided into three age groups: 6-year-olds (8 boys and 8 girls,  $M = 6$  years 9 months,  $SD = 5$  months); 9-year-olds (8 boys and 8 girls,  $M = 9$  years 3 months,  $SD = 6$  months) and 11-year-olds (8 boys and 8 girls,  $M = 11$  years 2 months,  $SD = 5$  months).

### *Procedure and dependent measures*

Children were tested individually by one of three female experimenters in a quiet room at their own school. Testing began by training children to use a 5-point scale to be used later in the procedure. Subsequently, children gave their shame and guilt ratings in response to each of the shame- and/or guilt-eliciting situations.

*Scale training.* The rating scale consisted of five size-graduated vertical rectangles of a bright blue colour that were drawn on a white piece of paper. The 6-year-olds received an elaborate training in how to use the scale. The experimenter began the training by pointing to each rectangle and verbalizing the appropriate label (not at all; a little bit; quite a bit; a lot; very, very much). The experimenter then explained how the scale could be used, using as an example how scary different animals were (the animals used were lambs, mice, big dogs, lions and crocodiles). To check scale comprehension, children were asked to rate how strong several persons were (including a giant, a policeman, a father, a big child, an old lady, a small child and a baby). Since the same procedure has been used successfully in previous research with even younger children (Olthof & Engelberts-Vaske, 1997), children were not expected to have difficulties using the scale and this expectation was borne out by their responses to the strength question. The 9- and 11-year-olds received a shorter version of the scale training.

*Guilt and shame judgments.* The experimenter successively described the 10 situations employed.<sup>1</sup> Each situation featured a protagonist of the same sex as the child. There were additional minor differences between the boys' and the girls' versions of the situation descriptions (e.g. when reference was made to boys' vs. girls' toys). Translated versions of the original Dutch-language situation descriptions are presented in the Appendix.

All situations were presented in a fixed random order in a single session of about 20 min. After describing a situation, the experimenter first asked the term-based and correlate-based shame questions and then the term-based and correlate-based guilt questions. The term-based questions were: 'How much did [protagonist's name] feel ashamed (guilty)? Didn't she (he) feel ashamed (guilty) at all, did she (he) feel ashamed (guilty) a little bit, quite a bit, a lot, or very, very much?' When asking these questions, the experimenter pointed to the appropriate rectangles of the scale. In the correlate-based questions, the child was asked to use the same rating scale to indicate to what extent the protagonist would experience a particular experiential correlate of shame (guilt) that was specifically tailored for that situation. All correlates are listed in the Appendix, together with the corresponding situations.

<sup>1</sup> In fact, another four situations were included that were aimed to explore the shame- and guilt-eliciting characteristics of certain types of illness-related behaviour. Since children's responses to these situations are only tangentially relevant to the purposes of this study, they are not reported here.

## Results

### *Differentiating shame from guilt in the two types of situations*

The term-based and correlate-based ratings were averaged across the five shame-only situations and across the five shame-and-guilt situations. As a check on whether both categories of situations were sufficiently homogeneous to justify combining them, the analyses with the averaged term-based ratings, reported below, were paralleled by two sets of five additional analyses. In the first set, the authors successively replaced the term-based shame-only average by the term-based ratings of each of the five shame-only situations. In the second set, the term-based guilt-and-shame average was successively replaced by the term-based ratings of each of the five guilt-and-shame situations. Subsequently, the equivalent analyses were also carried out for the correlate-based ratings.

Even though the five analyses within each set usually differed somewhat in terms of whether particular effects were or were not significant, the interaction effects that were particularly relevant for the purposes of this study were generally found to be quite similar within each set. (These results can be obtained from the first author.) These results were taken to indicate that the situations within the shame-only and guilt-and-shame categories were sufficiently homogeneous to justify combining them. These averaged ratings are further used in this study.

Further preliminary analyses with the averaged ratings revealed that although there were some effects of gender on children's ratings, the inclusion of gender did not qualify any of the conclusions that could be derived from analyses without gender. Therefore, to save space, gender is ignored in analyses below.

First tested were the predictions that (1) the shame-only situations would elicit higher ratings of shame than of guilt, (2) the shame-only situations would elicit lower ratings of guilt than the shame-and-guilt situations, and (3) the eldest children's ratings would better confirm the first two predictions than those of younger children. This was done by carrying out two separate  $3 (\text{Age}) \times 2 (\text{Type of Situation} = \text{shame-only vs. shame-and-guilt}) \times 2 (\text{Type of Judgment} = \text{shame vs. guilt})$  mixed-design analyses of variance on children's term-based ratings and on their correlate-based ratings. Note that the first two predictions imply a significant Type of Situation  $\times$  Type of Judgment interaction and that the third prediction implies a significant three-way interaction of Age  $\times$  Type of Situation  $\times$  Type of Judgment.

In addition to significant Type of Situation and Type of Judgment main effects, the predicted Type of Situation  $\times$  Type of Judgment interaction was in fact significant in both analyses. The means and the *F*s representing these effects are presented in the upper panel of Table 1 for the term-based ratings, and in the upper panel of Table 2 for the correlate-based ratings. To examine further whether the Type of Situation  $\times$  Type of Judgment interactions reflect the predicted differences, two additional one-factor within-subjects analyses of variance were carried out. In the first of these analyses, children's guilt and shame ratings for the shame-only situations were compared. The results are indicated in Tables 1 and 2 by whether the corresponding means do or do not share an identical superscript. The results of the second analysis, in which children's guilt ratings for the shame-only situations were compared to their guilt ratings for the shame-and-guilt



situations, are indicated by whether the corresponding means in Tables 1 and 2 do or do not share an identical subscript.

As can be seen in Tables 1 and 2 (upper panels), the first two predictions were confirmed. The shame-only situations elicited higher ratings of shame than of guilt, and children's ratings of guilt were lower in the shame-only situations than in the shame-and-guilt situations. This pattern occurred irrespective of whether the ratings were term-based (see Table 1) or correlate-based (see Table 2).

In both analyses, the main effect of Age was also significant ( $F_{s(2,45)}$  for the term-based vs. correlate-based ratings were 8.78,  $p = .001$  vs. 11.32,  $p < .001$ , respectively) and the same was true for the Age  $\times$  Type of Situation  $\times$  Type of Judgment interaction ( $F_s$  for the term-based vs. correlate-based ratings were 6.19,  $p < .01$  vs. 12.93,  $p < .001$ , respectively). The mean term-based and correlate-based ratings representing the Age  $\times$  Type of Situation  $\times$  Type of Judgment interactions are presented in the lower panels of Tables 1 and 2, respectively. To analyse these interactions further, separate 2 (Type of Situation)  $\times$  2 (Type of Judgment) fully within-participants analyses of variance were carried out for each age group's term-based and correlate-based ratings separately. The results of these analyses are presented in the right-hand columns of the lower panels of Tables 1 and 2.

**Table 1.** Means and ANOVA results representing interactions of Type of Situation (TS)  $\times$  Type of Judgment (TJ) (upper panel) and of Age  $\times$  Type of Situation  $\times$  Type of Judgment (lower panels) in children's term-based ratings

Type of situation	Type of judgment		Analyses of variance		
	Shame	Guilt	Effect	<i>F</i>	<i>p</i>
All ages					
Shame-only	3.85 <sup>b</sup> (.75)	2.85 <sup>a</sup> <sub>c</sub> (.85)	TS	13.98	.001
Shame-and-guilt	3.89 (.77)	3.36 <sup>d</sup> (.63)	TJ	110.48	.001
			TS $\times$ TJ	17.45	.001
Age 6					
Shame-only	4.09 <sup>b</sup> (.54)	3.23 <sup>a</sup> <sub>c</sub> (.75)	TS	0.70	n.s.
Shame-and-guilt	4.23 (.72)	3.30 <sup>c</sup> (.64)	TJ	30.58	.001
			TS $\times$ TJ	0.08	n.s.
Age 9					
Shame-only	4.00 <sup>b</sup> (.81)	3.13 <sup>a</sup> <sub>c</sub> (.73)	TS	6.69	.05
Shame-and-guilt	4.03 (.66)	3.75 <sup>d</sup> (.52)	TJ	24.57	.001
			TS $\times$ TJ	12.56	.01
Age 11					
Shame-only	3.46 <sup>b</sup> (.75)	2.19 <sup>a</sup> <sub>c</sub> (.68)	TS	10.16	.01
Shame-and-guilt	3.43 (.73)	3.03 <sup>d</sup> (.51)	TJ	67.95	.001
			TS $\times$ TJ	23.96	.001

*Note.* Standard deviations are given in parentheses. Means within the 'shame-only' rows not sharing an identical superscript and means within the 'guilt' columns not sharing an identical subscript differ significantly.

The predicted Type of Situation  $\times$  Type of Judgment interaction was not yet evident in the 6-year-olds' term-based ratings (see Table 1, lower panel), but it emerged as a marginally significant effect in their correlate-based ratings (see Table 2, lower panel). For the 9- and 11-year-olds the interaction was significant, irrespective of whether the ratings were term-based or correlate-based. As before, these interactions were examined further for each age group separately by carrying out the two one-factor analyses described above.

As can be seen in the lower panels of Tables 1 and 2, the results for the 9- and 11-year-olds were fully consistent with the predictions. For these age groups, the Type of Situation  $\times$  Type of Judgment interaction was significant, the shame-only situations elicited higher ratings of shame than of guilt, and ratings of guilt were lower for the shame-only situations than for the shame-and-guilt situations.

The 6-year-old children's term-based ratings failed to show a significant Type of Situation  $\times$  Type of Judgment interaction and these children also failed to distinguish between both types of situations when rating guilt. The predicted interaction did approach significance in the 6-year-olds' correlate-based ratings, but there they failed to give higher ratings of shame than of guilt for the shame-only situations. In sum, the results for the 6-year-olds were not fully consistent with the first two predictions, which is consistent with the third prediction.

**Table 2.** Means and ANOVA results representing interactions of Type of Situation (TS)  $\times$  Type of Judgment (TJ) (upper panel) and of Age  $\times$  Type of Situation  $\times$  Type of Judgment (lower panels) in children's correlate-based ratings

Type of situation	Type of judgment		Analyses of variance		
	Shame	Guilt	Effect	<i>F</i>	<i>p</i>
<b>All ages</b>					
Shame-only	3.23 <sup>b</sup> (.82)	2.81 <sup>a</sup> <sub>c</sub> (.72)	TS	9.80	.01
Shame-and-guilt	2.92 (.85)	3.67 <sup>d</sup> (.68)	TJ	4.77	.05
			TS $\times$ TJ	110.02	.001
<b>Age 6</b>					
Shame-only	3.14 <sup>a</sup> (.79)	3.19 <sup>a</sup> <sub>c</sub> (.58)	TS	1.81	n.s.
Shame-and-guilt	3.18 (.87)	3.61 <sup>d</sup> (.65)	TJ	3.16	.10
			TS $\times$ TJ	4.12	.06
<b>Age 9</b>					
Shame-only	3.59 <sup>b</sup> (.88)	3.03 <sup>a</sup> <sub>c</sub> (.68)	TS	10.78	.01
Shame-and-guilt	3.36 (.69)	4.09 <sup>d</sup> (.48)	TJ	0.57	n.s.
			TS $\times$ TJ	39.48	.001
<b>Age 11</b>					
Shame-only	2.96 <sup>b</sup> (.69)	2.23 <sup>a</sup> <sub>c</sub> (.51)	TS	1.50	n.s.
Shame-and-guilt	2.21 (.48)	3.30 <sup>d</sup> (.67) <sub>s</sub>	TJ	1.57	n.s.
			TS $\times$ TJ	75.77	.001

*Note.* Standard deviations are given in parentheses. Means within the 'shame-only' rows not sharing an identical superscript and means within the 'guilt' columns not sharing an identical subscript differ significantly.

## Discussion

The study's first aim was to examine whether children would attribute guilt specifically to persons who have caused harm to other persons, while attributing shame to any person who behaves incoherently and/or incompetently. As was clear from the analyses of variance, both the 9- and 11-year-olds' judgments were consistent with the predictions. That is, these children attributed more shame than guilt to protagonists in shame-only situations, and they attributed more guilt to protagonists in shame-and-guilt situations than to protagonists in the shame-only situations.

These findings indicate that situations that elicit shame rather than guilt can be distinguished from situations that elicit both shame and guilt. As such, they provide partial support for the assumption that two separate dimensions underlie the shame- and guilt-eliciting nature of events. Obviously, a full test of this idea would also require the use of situations that would elicit guilt rather than shame. However, performing such a test is difficult, since violating a moral rule by, for example, causing harm to someone can also very easily elicit thoughts that one might be seen as a clumsy person or as someone who is unable to restrain one's anger. By far the most guilt-eliciting events can therefore be expected to elicit shame as well. However, the analysis implies that there should nevertheless exist 'guilt-only' situations that involve causing harm to someone, but without implying an unwanted identity. In fact, one of the authors recently found that cases in which a protagonist's illness causes trouble for other persons might constitute such situations (Olthof, Bloemers, Deij, & Ferguson, 1998).

The second aim was to examine the development of children's ability to distinguish between shame-only and shame-and-guilt situations when giving ratings of shame and guilt. As was clear from the interactions with Age, the 6-year-olds did not make the relevant distinctions as clearly as the 9- and 11-year-olds. This finding supports the hypothesis that there is an age-related increase in children's ability to associate situations in which someone behaves incoherently and/or incompetently without causing harm to anyone with the feeling of shame and to associate situations in which the protagonist's incompetent and/or incoherent behaviour does cause harm with feelings of shame and guilt.

The third aim was to examine whether the term-based or the correlate-based ratings would yield children's best performance in terms of differentiating between judgments of shame vs. guilt for shame-only situations, and in terms of differentiating shame-only situations from shame-and-guilt situations when giving ratings of guilt. As is clear from the pattern of significant effects in Tables 1 and 2, there was no clear difference between the two types of measure in terms of conformity of children's ratings to the predictions. Accordingly, the results do not provide a direct basis for arguing that either term-based or correlate-based ratings are preferable in research with children. However, some aspects of the use of correlate-based ratings in this study and of the results that were obtained deserve further discussion.

A general problem with the correlate-based results is that any conclusion based on them can be criticized on the grounds that the particular choice of correlates has been unfortunate. For example, in the present context it could reasonably be argued that the guilt correlates used in the shame-only situations were not very plausible and that more plausible alternatives could have been used. It is not thought, however, that this had

much effect on children's ratings. Inspection of Tables 1 and 2 reveals that children's term-based ratings of guilt for the shame-only situations were as low as their correlate-based ratings for these same situations. This suggests that children did not so much consider the particular correlates to be implausible, but that they rather considered the occurrence of guilt in the shame-only situations to be implausible.

Similarly, it could be argued that the choice of shame correlates in the shame-and-guilt and the shame-only situations was unfortunate in that they were not quite comparable. Specifically, whereas most of the shame-only situations included blushing as the shame correlate, which could be seen as reflecting fairly mild forms of shame, most of the shame-and-guilt situations included socially undesirable shame correlates like wanting to hide behind one's mother or thinking that one is not liked by other children. In support of this criticism, it could further be argued that it explains a surprising aspect of the 11-year-olds' ratings (i.e. that these children's correlate-based ratings of shame were considerably lower for the shame-and-guilt situations than for the shame-only situations, whereas the corresponding difference did not exist for their term-based ratings).

Fortunately, there is an empirical way to examine the effects of the use of different shame correlates in the shame-only vs. shame-and-guilt situations, because even for the shame-and-guilt situations blushing was used once as the shame-correlate (i.e. in situation SAG-2), and even for the shame-only situations the thought of being disliked was used once as the shame-correlate (i.e. in situation SO-5). Accordingly, to compare the 11-year-olds' correlate-based shame ratings for the four shame-only situations that included blushing as the shame correlate with the ratings for the one shame-and-guilt situation (SAG-2) that also included blushing as the shame correlate, an additional analysis of variance was carried out with Type of Situation (the four shame-only situations vs. the one shame-and-guilt situation) as the only within-participants factor. This analysis yielded a significant effect of Type of Situation ( $F(1,15) = 33.45, p < .001$ ), with the means for the shame-only vs. shame-and-guilt situations being 2.95 vs. 1.89, respectively. A complementary analysis that compared the same children's correlate-based shame ratings for the one shame-only situation that included the thought of not being liked as the shame correlate (i.e. SO-5) with those for the four shame-and-guilt situations that included similarly socially undesirable shame correlates also yielded a significant effect of Type of Situation ( $F(1,15) = 6.00, p < .05$ ), with the means for the shame-only vs. shame-and-guilt situations being 3.00 vs. 2.30, respectively.

Accordingly, even when similar shame correlates were employed in each type of situation, children's correlate-based ratings were still lower for the shame-and-guilt situations than for the shame-only situations. This suggests that the results obtained with the shame correlates in this study cannot be explained in terms of the specific nature of the correlates that were used.

The introductory text above discusses a potential problem of using correlates (i.e. that a respondent might deny that a particular guilt- or shame-correlate is likely to occur because he or she considers a different correlate more likely and not because he or she imagines not feeling guilty or ashamed). Even though children did not perform worse when giving correlate-based ratings than when giving term-based ratings, two aspects of the data nevertheless suggest that the use of correlate-based ratings might lead one to underestimate the intensity of respondents' imagined emotions.

The first concerns the 11-year-olds' relatively low correlate-based ratings of shame for

the shame-and-guilt situations. These ratings might reflect the fact that, unlike the term 'shame', the shame correlates in the shame-and-guilt situations had no bearing on morality, whereas children did perceive these situations as morally relevant. Such a partial mismatch between the correlates and the situations may have led them to lower their ratings. A second indication that correlates possibly are too specific to warrant using them as substitutes for the emotional terms themselves is that children's correlate-based ratings of shame were generally lower than the corresponding term-based ratings (see Tables 1 and 2).

Altogether, these findings are inconsistent with a common assumption in the shame-and guilt-proneness literature (i.e. that correlate-based questions are preferable to term-based questions). The data indicate that from the age of 9 upward, children are perfectly well able to differentiate shame from guilt, even when giving term-based judgments. As such, these findings confirm earlier findings in the developmental literature (Ferguson *et al.* 1991; Harris *et al.* 1987) that children from mid-school age onwards already have considerable knowledge of the meaning of the terms 'guilt' and 'shame'. Given the disadvantages of correlate-based judgments and the good performance of participants from about the age of 9 onwards when giving term-based judgments, researchers should seriously consider the use of term-based judgments in addition to, or instead of, correlate-based judgments.

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## Appendix: The three types of situations used, together with corresponding experiential correlates for shame and for guilt

### *Shame-and-guilt (SAG) situations*

**SAG–1.** Marco has a friend. All the children in the class like that friend very much. He is always invited to other children's birthday parties. Marco is a bit jealous and during break he says nasty things about his friend. The next day, no-one wants to play with Marco's friend anymore and he is very sad. (Shame correlate: Marco thinks: 'I am not a nice friend at all'; Guilt correlate: Marco thinks: 'It's my fault that nobody likes my friend anymore'.)

**SAG–2.** Tommy and his mother are sitting round the table. Tommy drinks his juice and his mother is writing a letter. Then Tommy calls for the cat and the cat jumps on to the table, knocking over Tommy's glass. Tommy's juice spills all over his mother's letter. (Shame correlate: Tommy goes red in the face; Guilt correlate: Tommy does his best to be nice to his mother.)

**SAG–3.** Job has a friend who can run very fast. One day his friend takes part in a race. Job is a bit jealous of his friend. Job goes to see his friend in the race, but his friend loses. Job thinks: 'Oh boy, I'm glad he lost.' Then Job sees that his friend is very sad. (Shame correlate: Job quickly looks the other way when his friend approaches him. He can only look down at his feet when his friend stands next to him; Guilt correlate: Job thinks: 'It's terrible that I was happy because my friend lost the race'.)

**SAG–4.** Cas is playing upstairs with a friend in his friend's house. They are playing with his friend's toy car. Then Cas hears that his mother has come to fetch him. He rushes downstairs, but suddenly he hears:

'CRACK!' Cas sees that he has stepped on his friend's car. (Shame correlate: Cas would like to rush to his mother and hide behind her back; Guilt correlate: All the time Cas is thinking about what he should do to make it up to his friend.)

SAG-5. Today Pim is in a bad mood. At home he quarrels with everyone. At school he is also in a bad mood. When a boy accidentally steps on Pim's toes, Pim loses his temper and shouts out loud: 'Hey, look where you're walking!' The other boy is terrified and everyone in the class looks at Pim. (Shame correlate: Pim thinks that the other children in his class won't like him anymore; Guilt correlate: Pim is sorry that he shouted at the other boy.)

### *Shame-only (SO) situations*

SO-1. Last night Erik did not sleep well. He is still very tired when he has to get up in the morning. At school he is almost asleep. Then the teacher asks him a question. Erik is startled and he has no idea what the question is about. (Shame correlate: Erik goes red in the face; Guilt correlate: Erik thinks: 'I'm sorry for the teacher that I almost fell asleep'.)

SO-2. Children in Rik's class are having a reading lesson. Then it's Rik's turn to read. When he comes to a difficult word, Rik doesn't know how to pronounce it, but he does make a try. All the children start laughing and Rik realizes that he has made a mistake pronouncing the word. (Shame correlate: Rik goes red in the face; Guilt correlate: Rik thinks: 'I might get punished for this'.)

SO-3. Tim is invited to a party where he doesn't know many other children. All the children are given a huge glass of Coca Cola. Tim is very thirsty and he quickly finishes his coke. Then suddenly he burps out loud. (Shame correlate: Tim goes red in the face; Guilt correlate: Tim thinks: 'How awful for the other children. Why do I always drink so fast?'.)

SO-4. In the playground, Joost is talking with a girl from his class, called Nicolien. Then the other boys from his class come along. One boy shouts: 'Joost is in love, Joost is in love!' All the children start laughing. (Shame correlate: Joost goes red in the face; Guilt correlate: Joost thinks: 'It must be terrible for Nicolien to hear those boys say such things'.)

SO-5. In physical exercise class, the children from Bart's group are going to play volleyball. The teacher asks two boys to form a team by picking new team members in turn. In the end, everyone has been included in a team, except Bart. He is the only one left over. (Shame correlate: Bart thinks: 'There we are, they don't like me at all'; Guilt correlate: Bart feels sorry for the other children that he isn't better at volleyball. He is only a nuisance to them.)

*Note.* The situation descriptions were translated from the original Dutch.